



# Institutional cryptocurrency trading

## Addressing industry concerns and solving the technical issues

According to a recent report from TABB Group significant sums of institutional money is sitting on the sidelines, just waiting for the right conditions to join in the cryptocurrency trading market. However existing business and crypto trading infrastructure solutions are not seen as technically robust enough to satisfy the demands of many institutional investors and trading firms. For example, there's a lack of a sophisticated clearing and settlement infrastructure. Centralized wallets or custody are open to theft; Omnibus fund accounts are not transparent or independently verifiable or efficient enough; The requirement to place funds with each centralized exchange is not an efficient use of capital; Counterparty risk is a big issue, as is lack of banking support for crypto assets. Trade connectivity is relatively slow and unreliable and there are difficulties with crypto liquidity and accessing crypto market data.

e-Forex has therefore brought together James Banister, CEO, Market Synergy, Hu Liang CEO of Omniex, Ayal Jedeikin, CMO of TradAir and Rosario Ingargiola, CEO of OTCXN to discuss some of these questions and see how new technologies and solutions are being developed to help solve them.

**What are biggest risks in the crypto trading space for institutional players and how might technology solutions be utilised to help mitigate these?**

**RI:** We believe that custody, while in short supply at the moment, is a solved problem, and no longer an unmanageable risk. The technology exists, the insurance exists and big regulated names with big balance sheets are coming to market to perform crypto custody. There is one major remaining risk regardless of whether you are trading on exchange or OTC, namely – trading counterparty and settlement risk. or trading on exchange, holding assets at the

exchange means counterparty risk to the exchange itself, and this is not mitigated by the exchange creating a separate affiliated custody business to hold client assets. When trading OTC, the biggest risk is initiator risk. Someone has to go first, i.e., you wire funds and then wait for your counterparty to confirm receipt and finally send the crypto leg to your wallet. These trades, usually initiated/agreed in a chat application, typically leave you completely exposed for up to an entire business day.

**What workflow capabilities should platforms be providing for institutional investors and asset managers looking to access**

**this new market and trade a portfolio of diverse crypto-assets in a more consolidated manner?**

**HL:** A robust crypto-asset platform must afford the same, front-to-back office functionalities institutional investors are used to today. At a high level, that includes portfolio management, trade execution, investment operations, risk & compliance. For institutional investors to more broadly adopt this new asset class, platform providers need to create a familiar workflow, though with a new underlying platform, so institutions can more seamlessly bring crypto into their existing portfolios.

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**What factors might influence whether an institutional trading firm decides to build their own or buy in a crypto trading platform?**

**AJ:** Keeping technology up to date in such a fast-moving environment can be an extremely expensive and IT resource hungry challenge for companies. When connections to new exchanges and liquidity venues are required on an almost weekly basis, firms will lag behind if they can't respond quickly to market changes. Crypto specialists like TradAir have a strong overview of the market needs from all perspectives and are much faster to respond to market changes as they act on behalf of many participants. For example, we ensure that our clients can handle both deliverable and non-deliverable FX as well as CFDs which is a critical element for crypto trading.

**What advantages does the outsourced connectivity model have for trading firms looking to get access to the crypto trading market?**

**JB:** The market for digital assets is in its infancy and will become more streamlined in time, with likely 5–10 recognised major exchanges operating globally, and each exchange offering a myriad of crypto asset pricing. Outsourced



connectivity solutions make it easy, fast and cost-effective for banks, brokers or hedge funds to connect to a recognised exchange and trade digital assets. Market Synergy provides outsourced connectivity and hosting services to Bitfinex, the world's leading cryptocurrency trading platform, delivering robust, high performance connectivity for its institutional clients. This means that any institution wanting to trade cryptocurrencies can connect through Market Synergy and access a wide selection of digital assets. We offer the Bitfinex FIX feed or ISP link to their digital asset gateway, which provides a simple, secure and effective way for traditional trading firms to diversify and provide their clients with opportunities to

trade this new asset class.

**Why are many institutional investors likely to require purpose-built technology to solve the challenges of trading crypto assets, rather than attempting to bolt on crypto-asset capabilities to a platform built for another asset class?**

**HL:** While cryptos do appear superficially similar to currency assets, this is a fundamentally new asset class with unique attributes. Everything from exchange connectivity, settlement process, security master and even market structure are different from existing asset classes. As such, while a bolt-on solution can work in the near term, an asset class as transformational as

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Compliance can be a challenge in the crypto world

crypto requires an operating platform that's purposefully built to ensure it can change and adapt to this rapidly evolving landscape.

**Many brokers entering the crypto space need enterprise-grade trading platforms on which to aggregate data from an expanding list of venues, produce consolidated order books, publish pricing and route order flows. What key features, tools and widgets should they be looking for from a suitable trading platform to do these tasks and help them to manage risk at the same time?**

**AJ:** As more brokers move to expand their offering into

crypto, they need to have a platform that can deal with the specific nuances of handling this new digital asset class such as tick size, price and size range, as well as being able to hold both crypto and fiat



Rosario Ingargiola

Many people don't realize that when you trade on a crypto exchange there is no public blockchain transaction corresponding to your trade

balances. To be successful, a platform needs to offer the end user a personalized experience, be it in the front-end GUI or specific pricing and risk management tailored per user.

**What attributes do bespoke network solutions need to have to address the fragmentation of connectivity in the cryptocurrency market and meet the high-end needs of institutional trading firms?**

**JB:** Firms like Bitfinex want to focus on being an exchange and do not want to divert their resources to handle the connectivity. They selected Market Synergy because of our group's expertise in connectivity for other asset classes for the institutional market. Ultimately, we have created a bespoke network solution to ease the fragmentation of connectivity in the 24 hour digital asset market. Key attributes we provide are security, a robust network, low latency and 24x7 monitoring. We offer a single point of contact which makes it easy to deal with any issues quickly and efficiently, should they arise.

**What issues should institutional crypto trading**

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**firms consider when looking for solutions from the technology providers they decide to partner with in this fast-growing market?**

**RI:** First of all, avoid building or buying a “bridge-to-nowhere” – seek solutions that are already integrated with infrastructure that uses technology to eliminate trading counterparty and settlement risk and enables crypto trading at institutional scale by removing public ledger transactions from the real-time trading pipeline. As with any vendor partnership, look for solutions offered by teams with true institutional trading technology, FX markets and regulatory expertise.

**Industry standard FIX API integration is fine for FX**

**trading but what about crypto trading? Can it deliver the required service levels?**

**JB:** I believe that the new FIX adapter which Bitfinex has developed delivers the required service levels and is ideally suited for any institution wishing to do high frequency trading of digital assets. It enables them to trade in an efficient and professional way.

**The majority of crypto exchanges are created to support the GUI-based trading of their traditional users. What technology solutions are needed to support the latency sensitive automated and algorithmic trading requirements of institutional firms?**

**AJ:** Exchanges will need to

support the FIX protocol. The current websocket and REST protocols are not fast or robust enough to support the level of reliability and performance required for institutional level trading. We believe that much of crypto trading is moving to dark pools and exchange volume will not increase significantly in the future. To survive, exchanges will need to ensure that market makers have the tools to make markets and manage risk, while algorithmic traders require fast, sub-millisecond response time for orders and very low latency market data delivery.

**How difficult is it to get access to crypto tick data and what solutions are becoming available to enable examination of historical data from multiple trading venues to better understand market structure and enable institutional grade alpha generation and execution management?**

**HL:** It's less about the access and more about the quality, for both historical and real-time data. Many providers can deliver historical data, including Omniex in many circumstances, but we have to understand that the rapidly changing nature of crypto renders historical data ineffective quickly. Real-time market data aggregation, both exchange and OTC, can



Keeping technology up to date in such a fast-moving environment can be an extremely expensive

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When it comes to choice of data centre the top three areas to be considered are location, security and the ability to interface with other data centres

be available from new crypto specific platforms like ours, but users must have strong confidence that the provider has technology to filter off-market data and provide the streams in a reliable and efficient manner.

### What issues need to be considered by crypto platforms and trading venues when it comes to choosing suitable data centres in which to host their institutional grade networks and trading infrastructures?

**JB:** The top three areas to be considered are location, security and the ability to interface with other data centres. We did a considerable amount of due diligence to find the most appropriate data centre for Bitfinex. We selected Switzerland, in the heart of Crypto Valley, because it applies the highest standards in the world for security and is also ideal from a regulatory perspective.

### How much demand do you expect to see amongst institutional players for algorithmic trading of crypto assets and what order management functionality should firms be looking for



James Banister

### from a crypto platform that will meet their sophisticated trading and best execution requirements?

**HL:** The demand for algorithmic trading and best execution are already very strong. It's one thing for a retail investor to manually trade on a few exchanges or a family office to call a few OTC desks. But it's an entirely different requirement for an institutional investment fund with fiduciary duties to get the best executions possible for their LPs. This is one of the first questions we get when speaking with a new client, "do you support algo execution and help us achieve best execution?" We're proud to say that Omniex's core EMS provides algo execution and smart order routing.

### Analytics has become hugely important for all institutional

### FX trading firms nowadays. Are they likely to be seeking similar solutions for crypto's and if so what sort of platform metrics will be in demand?

**AJ:** We see analytics as a critical capability of any trading system regardless of asset class, which is why it is a baseline component of the system we offer. It is of paramount importance to track every tick received and every price distributed in order to optimize liquidity quality, analyse executions and increase client ROI effectively. Our analytics are visually presented in customizable dashboards which show metrics such as reject rates, last-look latency, spreads and our customers can also upload data and run custom queries.

### In what ways can new technologies including Blockchain be deployed to help address some of the custodial concerns and regulatory reporting issues associated with institutional crypto trading?

**RI:** Blockchain based capital markets trading infrastructure facilitates asset tokenization (required to trade and settle crypto 1,000's of times faster), real-time provability of assets on ledger (to drive processes such as real-time pre-trade



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risk), and atomic exchange of assets at the time of a trade match (concurrent transfer of ownership on two unique asset blockchain ledgers). In addition, it brings provability and transparency to transactions. Many people don't realize that when you trade on a crypto exchange there is no public blockchain transaction corresponding to your trade. Your trades are just numbers in the conventional database of the exchange operator.

With a blockchain based solution custodians can keep crypto assets in 100% deep cold storage even while they are freely traded and drastically reduce the frequency and risks



Hu Liang

associated with settlement movements. Needless to say, regulators will greatly prefer transparent, cryptographically provable, immutable transaction records. Fund administrators and auditors will be more apt to certify NAVs and performance based on blockchain records attributable to the client rather than mere PDF statements from multiple crypto exchanges of varying jurisdictions and reputation.

**How much of a threat could compliance represent for the growth of the institutional crypto trading market and what steps can platform and service providers take to try and keep regulators happy,**



Ayal Jedeikin

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**for example by encouraging procedures that shadow existing KYC/AML policies and rulesets applicable to more established asset classes?**

**HL:** Compliance can be a challenge in the crypto world, but if procedures are setup appropriately and systems are designed in a way to support this new asset class, KYC/AML should not prevent a fund investing in crypto. Trading against a retail exchange does present issues as the KYC/AML procedures of public exchanges might not meet the rigors of institutions if their orders are matched against retail flow. New institutionally focused exchanges are beginning to emerge, but more importantly, a healthy and robust OTC market is already present.

**Why should institutional crypto trading firms consider working with well established platform and technology providers with proven experience in the FX trading space?**

**RI:** Virtual currencies are closer to FX than any other asset class and they share much in common, from their regulatory treatment as commodities under CFTC jurisdiction, to extreme fragmentation with unique liquidity aggregation and smart order routing requirements.

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### Cryptos are fundamentally a new asset class with unique attributes

Further, some parts of the infrastructure are extremely non-trivial to build even for very large market participants, e.g., the portion of the OTCXN infrastructure that eliminates trading counterparty and settlement risk. Many providers in this new ecosystem don't actually have any institutional trading technology or capital markets trading expertise.

**Do you expect the institutional crypto trading market to evolve and mature in a similar way as FX has done over the past few years and what are the risks of a trading technology arms race developing?**

**AJ:** As trading moves from

primarily retail to institutional, key issues around custodianship and delivery of assets will need to be resolved before volumes increase significantly. For example, the crypto equivalent of SWIFT will need to be in place to allow for efficient post-trade settlement. We see the crypto space evolving at unparalleled speed, far faster than the FX or any other asset class. This is a positive for many companies experienced in providing trading systems who can adapt and evolve to address the needs of this market.

**What impact will improved regulatory clarity around cryptoassets have in helping**

**to attract greater numbers of institutional trading firms to the market?**

**RI:** The bulk of regulatory uncertainty is largely related to ICO issued altcoins and whether or not they are securities and should be issued and traded as such. The second serious issue is related to businesses that effectively custody or facilitate trading of retail client assets whether virtual currencies or securities. If you are willing to dig deep and rely on legal memoranda then regulatory clarity is possible. When the regulators give definitive guidance on these issues it will remove the fear that currently sits within institutional ranks and